

Coal Bed Methane and Water Policy in Montana

2002



Report to the 58th Legislature of the State of Montana

Environmental Quality Council

October 2002

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Introduction

The Coal Bed Methane/Water Policy Subcommittee and the EQC

The Environmental Quality Council (EQC) is a 17-member, bipartisan interim committee of the Montana Legislature. The EQC appointed a Coal Bed Methane/Water Policy Subcommittee to address coal bed methane issues and the EQC's statutory and other water policy responsibilities during the 2001-2002 interim.

The Coal Bed Methane/Water Policy Subcommittee members are:

Senator Mack Cole, Chair

Senator Jon Tester, Vice Chair

Senator Pete Ekegren

Senator Bea McCarthy

Mr. Tom Ebzery

Ms. Julia Page

Review of the Interim

To carry out the responsibilities assigned to them by the EQC and House Joint Resolution No. 27 (2001), the Coal Bed Methane/Water Policy Subcommittee adopted a study work plan that outlined their goals and tasks. The Subcommittee's work plan was presented to and approved by the full EQC. The work plan provided direction to the Subcommittee throughout the interim. Outlined below are the goals identified by the Subcommittee and adopted by the EQC.

Coal Bed Methane Goals

- # Become informed about water policy issues related to coal bed methane development in Montana and Wyoming.
- # Analyze selected water policy issues related to coal bed methane development in Montana and Wyoming.
- # Promote the preparation of a timely, cost-effective, and adequate environmental impact statement (EIS) for coal bed methane development in Montana.
- # Foster economic development that is environmentally and socially sound.
- # Encourage public participation in coal bed methane policy development in a way that fosters productive harmony among various interests.
- # In partial fulfillment of the purpose of the Montana Environmental Policy Act (MEPA) pursuant to 75-1-102, MCA, facilitate state water policies that will encourage productive and enjoyable harmony between humans and their environment, protect the right to use and enjoy private property free of undue government regulation, promote efforts that will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of humans, and enrich the understanding of the ecological systems and natural resources important to the state.

Water Policy Goal

- # Become informed and gain a better understanding of critical water policy issues occurring in Montana.

Coal Bed Methane

Environmental Impact Statement

Monitoring the preparation of an EIS analyzing the impacts of coal bed methane development was a major focus of the Coal Bed Methane/Water Policy Subcommittee's activities. House Joint Resolution No. 27 (2001) requested that the EQC provide oversight for the state's preparation of or involvement in the EIS. The EIS was a joint project of the federal Bureau of Land Management (BLM), the Montana Department of Environmental Quality (DEQ), and the Montana Board of Oil and Gas Conservation (BOGC). New development of coal bed methane resources in Montana was on hold pending the completion of the EIS.

The Subcommittee was briefed on the status of the EIS and supplemental studies during meetings held on the following dates:

- # September 10, 2001;
- # December 10, 2001;
- # February 7, 2002; and
- # May 9, 2002.

Staff from the lead agencies answered questions from members concerning the alternatives considered and the data analyzed.

A draft EIS was distributed for public comment in February 2002. Six public meetings were held and comments were due May 15, 2002. As of August 2002, the final EIS was scheduled to be completed by the end of 2002.

Onsite Tour

The EQC visited coal bed methane facilities near Decker, Montana, and Arvada, Wyoming, on September 11, 2002. The tour was open to the public.

Understanding the Science of Water and Soils in Relation to Coal Bed Methane Development



Discharge water entering pond

<http://www.deq.state.mt.us/coalbedmethane>

The production of coal bed methane requires withdrawal of ground water in order to lower the pressure in the coal bed so methane can flow out of the coal. The withdrawal of ground water affects the quantity and quality of Montana's water resources. The Subcommittee and the full EQC were briefed on important scientific concepts and data related to the effect of coal bed methane development on the amount of water available, the quality of the water, and the effect of coal bed methane product water on soils. The topics covered during these presentations are summarized below.

- # **Soils and irrigation.** Water discharged from coal bed methane wells has the potential to adversely affect irrigation. Montana State University professor Jim Bauder explained concepts that are key to understanding the effect of coal bed methane product water on soils and crops to the Subcommittee (meeting minutes, December 10, 2001) and the full EQC (meeting minutes, February 8, 2002). Dr. Bauder discussed variables that affect the use of the water for irrigation, including salinity and sodicity, soil type, and crop type. He also discussed the importance of the relationship between salinity and the sodium adsorption ratio (SAR).
- # **Water quality.** Art Compton, administrator of the Planning, Prevention, and Assistance Division of the Montana DEQ also discussed water quality issues and water quality monitoring (Subcommittee meeting minutes, December 10, 2001).
- # **Water quantity.** Montana Bureau of Mines and Geology hydrogeologist John Wheaton described the production of coal bed methane and the effect of coal bed methane development on ground water resources (Subcommittee meeting minutes, February 7, 2002; EQC meeting minutes, February 8, 2002). Wheaton discussed the rate of production of water from coal bed methane wells, the distance from a well or field that ground water drawdown may occur, the effect of the reduction of pressure in the aquifer on the yield from wells and springs, and the recovery of the aquifer through ground water recharge after production ceases. Wheaton emphasized that effects vary from site to site.

Russell Levens, a hydrogeologist with the Department of Natural Resources and Conservation (DNRC) and presiding officer of the Technical Advisory Committee for the Powder River Controlled Ground Water Area discussed the need to monitor ground water levels and spring flows in and around the area of coal bed methane development (Subcommittee meeting

minutes, February 7, 2002). The Technical Advisory Committee serves as a forum for coordinating the monitoring activities of various entities.

Water Rights

A panel of experts on water rights presented their views on mechanisms to protect existing water rights in areas of coal bed methane development (Subcommittee meeting minutes, February 7, 2002). Mechanisms discussed include establishment of a controlled ground water area, water mitigation requirements, water monitoring, and the Coal Bed Methane Protection Act (Chapter 531, Laws of 2001), which established a program to compensate landowners and water right holders for uncompensated damage caused by the development of coal bed methane. In response to questions that were raised, Subcommittee staff prepared a memorandum regarding water mitigation agreements.

Perspectives on Coal Bed Methane Development

The Subcommittee and the full EQC heard presentations from several points of view on coal bed methane development. The topics covered during these presentations are summarized below.

- # **Landowners.** On its tour of coal bed methane sites in Wyoming, the full EQC heard from a landowner who discussed the benefits of coal bed methane development. The EQC also heard a presentation from a Montana landowner who had concerns about coal bed methane development (EQC meeting minutes, February 8, 2002).

- # **Water management.** The Subcommittee heard presentations regarding the management of water produced from coal bed methane wells from an industry perspective and an environmental perspective (Subcommittee meeting minutes, December 10, 2001).
- # **Public.** The Subcommittee heard comments from members of the audience after nearly every agenda item.

Permitting and Leasing

Staff representing boards and agencies with the authority to lease coal bed natural gas or to permit production-related activities made presentations to the Subcommittee about their processes and requirements, including bonding requirements (Subcommittee meeting minutes, December 10, 2001). Agencies and boards represented included the Montana DEQ, the Montana BOGC, the BLM, the U.S. Environmental Protection Agency (EPA), and the DNRC. Subcommittee staff presented a general overview of the primary permits required for coal bed methane development in Wyoming that are administered by the State of Wyoming.



Coal bed methane drilling rig
<http://www.deq.state.mt.us/coalbedmethane/>

Bruce Williams, representing the Montana Coal Bed Natural Gas Alliance, provided an industry perspective on permitting and leasing processes and requirements.

Tom Reid, supervisor of the Water Quality Discharge Permits section of the Montana DEQ Water Protection Bureau, discussed a draft general permit for coal bed methane product water. The DEQ issued the draft permit for public review in February 2002. Five public hearings were held and the deadline for written comments was May 15, 2002. A final permit will not be issued until the statewide programmatic EIS for coal bed methane development in Montana is completed and the record of decision has been signed.

The proposed general permit would only address discharges of coal bed methane water to off-drainage impoundments for the purpose of livestock or wildlife watering. Other discharges of coal bed methane water to state waters would be regulated through a different permit. The permit does not authorize the drilling of coal bed methane wells or the construction of impoundments. These activities are regulated by the Montana BOGC.

Litigation

In September 2001, the Subcommittee was provided with a list of nine lawsuits related to coal bed methane development in Montana (Subcommittee meeting minutes, September 10, 2001, Attachment #15). The Subcommittee was updated on the status of litigation in July 2002.

Mineral Rights

The Agency Oversight and MEPA Subcommittee of the EQC was informed about the process for identifying the owners of severed mineral rights (Oversight/MEPA Subcommittee meeting minutes, May 8, 2002). The panel included Monte Mason, DNRC; former Senator Tom Keating; Russ Gowen, Helena Abstract and Title; and Bonnie Ramey, Jefferson County Clerk and Recorder.

Other Activities

The Subcommittee was informed of the following activities.

Wyoming-Montana Water Quality Agreement

In September 2001, the directors of the environmental quality departments for Wyoming and Montana signed an interim memorandum of cooperation regarding coal bed methane development and water quality in the Powder and Little Powder Rivers. The agreement entails monitoring of water quality and regulatory action when identified thresholds are exceeded. The Subcommittee heard a brief report on this agreement on September 10, 2001.

Water Quality Standards and Effluent Limitations

The Northern Cheyenne Tribe proposed numeric water quality standards for electrical conductivity (EC) and SAR. The Board of Environmental Review decided to initiate the rulemaking process to establish numeric water quality standards for EC and SAR.

Region 8 of the EPA was in the process of making a best professional judgment determination of effluent limitations that represent best available technology economically achievable for coal bed methane product waters. The determination will be used by the EPA to write permits in Indian Country. The analysis will also be available to inform the states in the implementation of delegated permit programs. (The Montana DEQ has been delegated the authority to issue permits outside of Indian Country in Montana.)

Total maximum daily loads (TMDLs) are required for some of the water bodies in the geographic area where coal bed methane development is occurring. The Montana DEQ announced that it was proposing to accelerate the schedule for development of TMDLs for the Powder and Tongue River watersheds and was intending to complete these TMDLs by 2002 (Subcommittee meeting minutes, February 7, 2002).

Flathead Lake Biological Station Study

The Flathead Lake Biological Station, located at Yellow Bay, was conducting a scientific study of the ecological integrity of streams and rivers in light of coal bed methane development. A white paper based on the scientific research was to be prepared for the 2003 Legislature.



Water Policy

Status of Drought in Montana

Governor's Drought Advisory Committee

The EQC was briefed by Lieutenant Governor Karl Ohs on Montana's drought status during the May 23, 2001, meeting. Lieutenant Governor Ohs gave an update on the Governor's Drought Advisory Committee and gave EQC members a copy of the Governor's report on "The Potential for Drought in Montana for 2001" (EQC meeting minutes, May 23, 2001, Exhibit #5). The EQC members discussed various issues with the Lieutenant Governor, including the possibility of opening up Conservation Reserve Program (CRP) acreages to haying and grazing, the status of reservoir levels, the determination of the severity of the drought, the drought and recreational uses of Montana's public lands, and drought management plans for wildlife.

Montana Natural Resource Information System (NRIS)

EQC members were given a presentation by NRIS staff on available online resources related to drought monitoring. Members were shown various web pages on the NRIS website that may prove valuable to them in judging the severity of the drought in their particular areas, as well as statewide.

Total Maximum Daily Loads (TMDLs)

Status of Statewide Program

Art Compton, administrator of the Planning, Prevention, and Assistance Division of the DEQ gave a brief overview to the Coal Bed Methane/Water Policy Subcommittee discussing the status of TMDLs in Montana (Subcommittee meeting minutes, February 7, 2002). The State is operating under a federal district court order¹ that states that all of the waters that were listed on the 1996 303(d) list must have TMDLs completed for them by May 5, 2007. The DEQ has prioritized the listed waters by watershed and has assigned a year of completion to each watershed. There were approximately 800 stream reaches on the 1996 303(d) list. The DEQ met the first deadline for the submittal of four watersheds by December 2001. There are eight watersheds to be completed and submitted to the EPA by December 2002. Any waters that have been added to the 303(d) list since the completion of the 1996 list will have 10 years from their listing date to have TMDLs completed.

Sage Creek TMDL -- A Learning Process

The Sage Creek TMDL was one of the first TMDLs completed in Montana and was submitted by DEQ to the EPA in December 2001. Local representatives of the Sage Creek Watershed Alliance expressed concern about the process and procedures used by DEQ when developing the TMDL. The EQC felt that these issues should be discussed with the DEQ to try to improve the TMDL process and



A spring flush at Sage Creek
Photo courtesy of the Liberty County
Conservation District

¹Friends of the Wild Swan, Inc. v. U.S. Environmental Protection Agency; Judge Donald W. Molloy, United States District Court, District of Montana, Missoula Division, Order, Cause No. CV 97-35-M-DWM. June 21, 2000.

make it as smooth and productive as possible. A group of EQC members met with both the Sage Creek Watershed Alliance and the DEQ in separate meetings to try to determine if there were issues with the TMDL development process that may have statewide impacts (Subcommittee meeting minutes, March 25, 2002). The EQC members who attended the meetings felt it was important to discuss the issues that had been raised in an effort to make the TMDL development process better in the future and in other watersheds.

Some of the issues addressed were:

- # the difference between eastern Montana and western Montana watersheds;
- # the lack of available data for many watersheds;
- # DEQ staff changes and shortages;
- # data collected and baseline conditions established in drought conditions vs. normal precipitation periods;
- # monitoring requirements of the TMDLs -- whether there is DEQ staff available to complete this requirement or whether local watershed groups are going to be expected to complete the monitoring;
- # because DEQ staff experience is mainly in the western Montana watersheds, whether training can be done on eastern Montana watersheds; and
- # contracting with private industry to complete the TMDLs.

(Subcommittee meeting minutes, March 25, 2002)

Reserved Water Rights Compact Commission

The Reserved Water Rights Compact Commission (Commission) can trace its existence to the 1972 Constitution, which created an obligation on the part of the state to keep a central record of all water rights in the state. Between 1972 and 1979, there were several attempts to implement the

central recordkeeping requirement. Those efforts culminated in the Water Use Act of 1979. Montana undertook a fairly burdensome and extensive process of trying to quantify all the water rights in Montana. When the Water Use Act was being written, it was pointed out that a special provision for federal and Indian water rights was needed. Those rights are fundamentally different than water rights under state law. In an effort to establish a system to deal with those rights, the Legislature created the Commission. The idea was that the Commission would attempt to negotiate water rights settlements without having to litigate those rights in court. This is unique to Montana; most other states have had to resort to costly and lengthy legal battles.

Compacts That Have Been Ratified By Congress

Since the Commission began in the 1980s, they have completed the following compacts:

- # Northern Cheyenne Tribe;
- # Chippewa Cree Tribe;
- # All national parks in Montana; and
- # Many federal agencies' water rights, e.g., U.S. Fish and Wildlife Service

Compacts That Are Waiting for Congressional Ratification

- # Fort Peck; and
- # Crow Tribe.

Compacts Yet to be Completed

- # Flathead Reservation;

- # Blackfeet Reservation;
- # Turtle Mountain Chippewa Tribe allotments; and
- # National Forest Service lands.

Litigation Related to Water Policy Issues

Throughout the interim, the Subcommittee reviewed various court decisions that addressed water policy issues. These decisions were reviewed and discussed in an effort to keep well-informed about how water policy laws are being implemented and challenged. The cases that they reviewed are:

Montana Supreme Court

- # Cape-France Enterprises v. The Estate of Lola H. Peed, 2001 MT 139
(Subcommittee meeting minutes, September 10, 2001, Attachment #3)
 - Clean and healthful environment.
- # Jeanne Gaudreau and Jerry Montelius v. Clinton Irrigation District, 2001 MT 164
(Subcommittee meeting minutes, September 10, 2001, Attachments #4 and #5)
 - Negligence and trespass as they apply to accidental flooding, due to ice jams, of neighboring property by an irrigation district canal.
- # Bitterroot River Protection Association, Inc. v. Bitterroot Conservation District, 2002 MT 66
(Subcommittee meeting minutes, May 8, 2002, Exhibit #3)
 - Who can make the initial determination of whether a body of water constitutes a "stream" as defined in statute.

- # In the Matter of: The Estate of Antoinette Hobbs, Deceased, 2002 MT 85
(Subcommittee meeting minutes, July 29, 2002, Exhibit #5)
 - Transfer of land between high-water mark and meander line to heirs.

Other Court Decisions

- # Friends of the Marias and Missouri River Citizens, Inc. v. DNRC and Sunny Brook Colony, Inc.
Montana First Judicial Court, County of Lewis and Clark, Cause No. CDV-2001-390
(Subcommittee meeting minutes, December 10, 2001)
 - Challenging DNRC's issuance of a beneficial use permit on the Marias River.
 - This case was dismissed in District Court.

EQC Statutory Responsibilities With Regard to Water Policy

The EQC is required by statute, 85-2-105, MCA, to analyze and comment on various water policy programs. The programs that the EQC addressed this interim were:

- # Natural Resource Information System, 90-15-305, MCA (EQC meeting minutes, May 23, 2001)
- # Water Leasing Study, 85-2-436, MCA (Sent to Council)
- # Renewable Resource Grant and Loan Program, 85-1-621, MCA (EQC meeting minutes, July 30, 2002)

Abbreviations

| | |
|------|--|
| BOGC | Montana Board of Oil and Gas Conservation |
| BLM | U.S. Bureau of Land Management |
| CRP | Conservation Reserve Program |
| DEQ | Montana Department of Environmental Quality |
| DNRC | Montana Department of Natural Resources and Conservation |
| EIS | Environmental Impact Statement |
| EC | Electrical Conductivity |
| EPA | U.S. Environmental Protection Agency |
| EQC | Environmental Quality Council |
| MEPA | Montana Environmental Policy Act |
| NRIS | Montana Natural Resource Information System |
| SAR | Sodium Adsorption Ratio |
| TMDL | Total Maximum Daily Load |

Information Resources

Environmental Quality Council

Coal Bed Methane/Water Policy Subcommittee

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Coal Bed Methane

General Information

<http://www.deq.state.mt.us/coalbedmethane/index.asp>

Environmental Impact Statement

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<http://www.deq.state.mt.us/coalbedmethane/EIS.asp>

Water Rights

Mary Vandebosch, Resource Policy Analyst, Legislative Environmental Policy Office,
memorandum re: *Water Mitigation Agreements for Coal Bed Methane Development*, February
28, 2002.

EPA Best Professional Judgment Determination

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<http://www.epa.gov/region08/water/wastewater/npdeshome/cbm/cbm.html>